

Appl. No. 10/694,641
Amdt. dated July 29, 2005
Second Preliminary Amendment

PATENT

Amendments to the Claims:

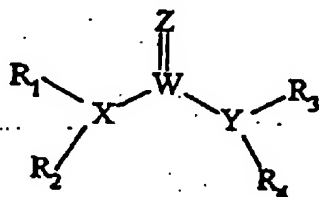
This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-13 (Canceled)

14. (Previously presented) A method of reducing blood pressure in a patient, the method comprising administering to the patient a therapeutically effective amount of an inhibitor of soluble epoxide hydrolase.

15. (Previously presented) A method of claim 14, wherein the inhibitor is a compound having a structure of:



wherein Z is oxygen or sulfur, W is carbon phosphorous or sulfur, X and Y is each independently nitrogen, oxygen, or sulfur, and X can further be carbon, at least one of R₁ - R₄ is hydrogen, R₂ is hydrogen when X is nitrogen but is not present when X is sulfur or oxygen, R₄ is hydrogen when Y is nitrogen but is not present when Y is sulfur or oxygen, R₁ and R₃ is each independently C₁ -C₂₀ substituted or unsubstituted alkyl, cycloalkyl, aryl, acyl, or heterocyclic.

16. (Previously presented) A method of claim 15, wherein W is carbon and Z is oxygen.

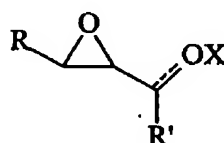
Appl. No. 10/694,641
 Amdt. dated July 29, 2005
 Second Preliminary Amendment

PATENT

17. (Previously presented) A method of claim 15, wherein X is nitrogen.

18. (Previously presented) A method of claim 15, wherein Y is nitrogen.

19. (Previously presented) A method of claim 14, wherein the inhibitor is a compound having a structure of:



wherein R is alkyl or aryl, the compound is *trans*-across the epoxide ring, OX is a carbonyl (=O) or hydroxy group (OH), and R' is a H, alkyl or aryl group.

20. (Previously presented) A method of claim 19, wherein said inhibitor has a structure wherein R, R', and X-Y are as follows:

(a) when R is C₆H₅, R' is C₆H₅, and X-Y is selected from the group consisting of: C-O, CH-OH, C-NOH, S-O, and CH-OCH₃,

(b) when R is 4-F-C₆H₄, R' is C₆H₅, and X-Y is selected from the group consisting of C-O and CH-OH;

(c) when R is 4-C₆H₅-C₆H₄, and R' is C₆H₅, X-y is selected from the group consisting of C-O, CH-OH, C-NOH, S-O and CH-OCH₃;

(d) when R is 4-C₆H₅-C₆H₄, and R' is 4-CH₃-C₆H₄, X-Y is selected from the group consisting of C-O and CH-OH;

(e) when R is C₁₀H₇, R' is C₆H₅ and X-Y is C-O;

(f) when R is 4-NO₂-C₆H₄, and R' is CH₃, X-Y is selected from the group consisting of C-O and CH-OH; or

(g) when R is 4-NO₂-C₆H₄, and R' is H, X-Y is CH-OH.

Appl. No. 10/694,641
Amdt. dated July 29, 2005
Second Preliminary Amendment

PATENT

21. (Previously presented) A method of claim 14, wherein the inhibitor is a pharmaceutically acceptable salt.

22. (Previously presented) A method of claim 14, wherein the inhibitor is administered orally.

23. (Previously presented) A method of claim 14, wherein the inhibitor is administered in a total daily dose from about 0.001 $\mu\text{M/kg}$ to about 100 mg/kg body weight of the patient.

24. (Canceled.)

25. (Canceled)

26. (Previously presented) A method of claim 14, wherein said blood pressure reduction comprises a reduction in systolic blood pressure.

27. (Previously presented) A method of claim 14, wherein said patient has high normal blood pressure.

28. (Previously presented) A method of claim 14, wherein the patient is at risk for cardiovascular disease, renal disease, or stroke.

29. (Previously presented) A method of claim 14, wherein the patient has cardiovascular disease or renal disease.

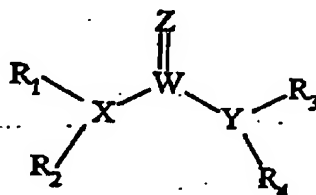
Appl. No. 10/694,641
Amdt. dated July 29, 2005
Second Preliminary Amendment

PATENT

Please enter the following new claims:

30. (New) A method of reducing hypertension in a patient, the method comprising administering to the patient a therapeutically effective amount of an inhibitor of soluble epoxide hydrolase.

31. (New) A method of claim 30, wherein the inhibitor is a compound having a structure of:



wherein Z is oxygen or sulfur, W is carbon phosphorous or sulfur, X and Y is each independently nitrogen, oxygen, or sulfur, and X can further be carbon, at least one of R₁ - R₄ is hydrogen, R₂ is hydrogen when X is nitrogen but is not present when X is sulfur or oxygen, R₄ is hydrogen when Y is nitrogen but is not present when Y is sulfur or oxygen, R₁ and R₃ is each independently C₁ -C₂₀ substituted or unsubstituted alkyl, cycloalkyl, aryl, acyl, or heterocyclic.

32. (New) A method of claim 31, wherein W is carbon and Z is oxygen.

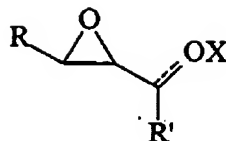
33. (New) A method of claim 31, wherein X is nitrogen.

34. (New) A method of claim 31, wherein Y is nitrogen.

35. (New) A method of claim 30, wherein the inhibitor is a compound having a structure of:

Appl. No. 10/694,641
Amdt. dated July 29, 2005
Second Preliminary Amendment

PATENT



wherein R is alkyl or aryl, the compound is *trans*-across the epoxide ring, OX is a carbonyl (—O) or hydroxy group (OH), and R' is a H, alkyl or aryl group.

36. (New) A method of claim 35, wherein said inhibitor has a structure wherein R, R', and X—Y are as follows:

(a) when R is C₆H₅, R' is C₆H₅, and X—Y is selected from the group consisting of: C=O, CH—OH, C=NOH, S=O, and CH—OCH₃,

(b) when R is 4-F—C₆H₄, R' is C₆H₅, and X—Y is selected from the group consisting of C—O and CH—OH;

(c) when R is 4-C₆H₅—C₆H₄, and R' is C₆H₅, X—Y is selected from the group consisting of C—O, CH—OH, C=NOH, S=O and CH—OCH₃;

(d) when R is 4-C₆H₅—C₆H₄, and R' is 4-CH₃—C₆H₄, X—Y is selected from the group consisting of C—O and CH—OH;

(e) when R is C₁₀H₇, R' is C₆H₅ and X—Y is C—O;

(f) when R is 4-NO₂—C₆H₄, and R' is CH₃, X—Y is selected from the group consisting of C—O and CH—OH; or

(g) when R is 4-NO₂—C₆H₄, and R' is H, X—Y is CH—OH.

37. (New) A method of claim 30, wherein the inhibitor is a pharmaceutically acceptable salt.

38. (New) A method of claim 30, wherein the inhibitor is administered orally.

39. (New) A method of claim 30, wherein the inhibitor is administered in a total daily dose from about 0.001 μM/kg to about 100 mg/kg body weight of the patient.

Appl. No. 10/694,641
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40. (New) A method of claim 30, wherein the hypertension is essential hypertension.

41. (New) A method of claim 30, wherein said reduction of hypertension comprises reducing systolic blood pressure.